RE: CLIMATE WHITE PAPER
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Image Management and Distribution Software

Monet has developed a complete image management, and distribution software solution for image intensive businesses as well as print industry service providers. Monet provides the software under the CLIMATE (Client Image MAnagement and TElecommunications) trade name. Integration and consulting services are also provided by Monet for turnkey installations. The CLIMATE solution is targeted toward businesses who need to control and distribute their files or wish to provide these services to their clients. A key feature of the CLIMATE software is its open, wide area connectivity, enabling clients from around the world to communicate, manage, and deliver files.

Monet also provides the CLIMATE solution as a service for graphic arts clients or service providers reducing the investment in costly in-house computer systems, disk storage, archiving, & telecommunications hardware. Additionally, the staffing needs for system and telecommunications specialists are reduced significantly or eliminated.

CLIMATE WORKFLOW

All Monet CLIMATE system activity is controlled by the Monet customer. Generally a client initiates all new orders for image input whether it is scanned or existing digital and fills out electronic data forms which are then processed by CLIMATE. Images or documents are linked to these data forms and are placed in service provider queues and automatically routed to the service provider, remote or local. CLIMATE processes and stores the images/documents and

makes the data available for browsing and lo-res retrieval as well as hi-res work orders.

Work orders for processing occur in the same manner (images or documents already on the system). A client builds the work order after browsing or downloading OPI images for placement in a document. Additionally, the page makeup document(s) can be transmitted to the particular service provider. Once images and any associated documents are selected the job is sent to CLIMATE for distribution. The order is then routed to the appropriate service provider. CLIMATE provides monthly reporting of activity and billing for clients. The reports include details of file storage usage and any of their subscribed users and service providers activity. Reports can be customized.

SYSTEM DESCRIPTION

The CLIMATE system is based upon an integrated distributed client/server web with wide area interconnection at two levels; image browsing and file transportation. Monet's CLIMATE system features a proprietary gateway front end and file delivery processing applications for the print industry that have been designed to handle the telecommunications and operating systems of the future.

The total system solution is comprised of a repository for images, variable bandwidth telecommunications, 3 tiered resolution data, firewall security, complete image management and control, comprehensive activity reports at client site and graphic arts knowledgeable support. Image browsing is handled over conventional dial-up telephone lines with standard computer hardware, currently Macintosh and, in the near future Windows 95 or NT on the PC. Monet software additions optimizes communication speed for file downloads and thumbnail image searching.

File transportation is handled by a communications server that is located at either a customer site and/or service provider sites and allows distributed file processing, retrieval, and communications handling. Functionality of the communications server is tailored to the Graphic Arts clients needs and/or to their customers or suppliers, i.e. specific file format translations and communications

connections. The ability to convert various file formats allows efficient re-purposing of image data for intermedia applications, including de-centralized on-demand printing.

Monet incorporates an advanced Windows NT server operating system. Process functions that handle communications, image processing, variable compression, file translation, file transmission, and reporting are divided up among three core servers that are task specific. File translation and order processing are distributed over the wide area as a function of the number of active communication servers that are subscribed to the system. The distribution stabilizes average throughput of the system and virtually eliminates I/O overload. Monet keeps track of the data through an SQL driven database that links to a secondary database server for the image library. This method enables the system to maintain a common format file structure for all image files and track variable compression ratios that are client defined, independent of the overall system.

Monet utilizes a licensed OPI software engine as the core for-placement-only generator. The system maintains a three tiered file system for browsing, EPS OPI, and modified standard hi-res read only image. All files archived to the system are never modified thus insuring integrity of the compressed file structure at any ratio. Files that would need revision are saved as a new file and the client librarian would determine the need to purge any older versions. Another feature of the storage system is the thumbnail and OPI generation. Occasionally a file may be corrupted in the generation process, therefore, CLIMATE provides a preview capability as the images are processed to check against file degradation. These files are what the user sees upon browsing or OPI download. If a file was corrupted the low-res files will show the fault, thus, the view files are a verification of the image library integrity. The Monet bundler module performs all of these tasks in the communication server prior to passing files to the main server.

Image File formats currently supported for variable JPEG compression are TIFF, and Scitex CT, with EPS/DCS soon to follow. All image formats are supported for lossless compression within the system as well as any other type of document file. The CLIMATE system also allows a user to group elements into a job for storage on the system. Monet is looking toward TIFF/IT as the long range standard. The phase II implementation of CLIMATE will support distributed database

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communication, remote archiving and integrated communication with Archetype MediaBank databases.

Communication services are being initially offered over Basic Rate ISDN but Primary rate and T1 links are available. Monet has built a proprietary communication handler for passage of secured data between subscriber points. This "bundler" handles all of the order form data, image translation if needed, OPI and thumbnail generation and packaging for transmission. CLIMATE's server center initiates all inbound and outbound data traffic to build a complete firewall for maximum security. Future developments of ATM, and SMDS will be incorporated in the CLIMATE system when available.

CONCLUSION

This entire process is easily viewed and managed from the desktop, providing seamless, cost effective, instant digital delivery of corporate-wide communications at significant savings over courier based operations. Monet is also offering its CLIMATE services to the Graphic Arts trade on an OEM basis for those who would prefer to maintain control of their existing accounts' Digital Image Assets. Monet's system is currently operational at its Tampa facility and Beta site agreements have been finalized in Boston, Massachusetts and Midland, Michigan, Milan, Illinois, and Memphis, Tennessee. Pricing for the software is based on system size and anticipated subscriber requirements. Preliminary pricing is available upon request.